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ABSTRACT

The secondary and college level guide outlines a course of study on the Middle East, with emphasis on water problems of the area. Among the course objectives are the following: (1) make generalizations about particular Middle Eastern cultures and support them with evidence; (2) interpret environmental and social data from specific Middle Eastern countries; (3) plan procedures for devising solutions to social problems such as sharing scarce water resources, diffusing educational opportunity, or resolving cross-cultural conflicts within Middle Eastern societies; and (4) forecast the directions in which Middle Eastern societies are most likely to move and have preferences regarding desirable social objectives in this area. Suggested teaching techniques include use of audio-visuals, questioning techniques, classroom discussions, field trips, and interviews. The major portion of the guide consists of case studies on the Universality of Water Problems and American Water Problems; Water Problems in the Middle East; The Nile River as a Source of Life for Egypt and the Sudan; and Reclaiming the Desert in Israel. A brief introduction to the topic, teaching strategies, and an annotated listing of audio-visual media are provided for each case study. Print sources of information on the Middle East, and education objectives of the course are also provided in the guide. (Author/RM)

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WATER

IN THE MIDDLE EAST

A Secondary and College Level

Multi-Media Study Guide

Prepared by

Eliezer Manneberg

SP 00 7525

WORLD EDUCATION PROJECT

School of Education
University of Connecticut
Storrs, Connecticut 06268

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DEFINING THE "MIDDLE EAST"

The term "Middle East" isn't universally accepted nor is there complete agreement about the territory that it includes. Originally, it was the name assigned to the British Military Command set up in Egypt prior to World War II. At this time it meant the lands at the southern and eastern ends of the Mediterranean Sea, stretching across to the Indian Ocean.

Four other terms for this area occur in the literature about it. From the European perspective, the sun rose to the East so lands at the East of Europe were designated the "Levant" or "place where the sun rises". The Crusades and trade routes that were opened during the mercantile era made Europeans aware of the "East", and soon they had coined "Near East" to indicate the portions of this large area that were nearest to them. The most recently devised term for this region is SWANA (South West Asia/North Africa) and it is probably the best because it recognizes cultural ties as well as geographical and economic relationships.

In this guide, the more familiar term "Middle East" is used. Included in this designation are:

Morocco, Algeria, Tunisia
Libya, the Egyptian Arab Republic and Sudan
Saudi Arabia, Yemen and Southern Yemen
Muscat, Oman, Bahrain, Kuwait, Qatar, and the Federated Sheikdoms
Israel
Jordan, Lebanon, Syria and Iraq
Turkey
Iran
Afganistan and Pakistan

Most of the Middle East was under Ottoman rule for over four hundred years prior to World War I. The majority of cultures in this region reflect various strands of the Muslim heritage. The modern nations of the Middle

East have usually taken their present shape and become sovereign entities only after World War I, or in a number of cases, since World War II.

The Middle East includes territories covering millions of square miles inhabited by more than two hundred million people. The people of the Middle East speak various dialects of Arabic, Armenian, Berber, Coptic, Hebrew, Kurdish, Persian, Urdu or Turkish; in the main. Because the Middle East has served through the ages either as a bridge or a bulwark between East and West, North and South; much in Western Civilization is rooted there. Most Middle Eastern intellectuals speak at least one European tongue and frequently several. But relatively few American or European intellectuals can speak a Middle Eastern language or even know very much about these important societies.

Most people in Occidental lands know only two things about the contemporary Middle East. They know that for over twenty-five years a struggle has been going on between Arabs and Israelis. And, since the "energy crisis" began, they know that many industrialized nations depend on the Middle East for fuel. Neither of these impressions is completely wrong; but America's cultural, economic and strategic links with the Middle East demand a much more sophisticated understanding of this region.[3]

SOURCES OF INFORMATION ON THE MIDDLE EAST

A vast literature on the Middle East exists, ranging from high quality scholarship to misleading and emotional propaganda. Alertness and critical thought are required in order to distinguish between accurate, first-hand materials and garbled or slanted sources. The language competencies, perspective and motives of each author have to be taken into account in order to locate dependable information sources.

Five reference works on the area can be recommended to teachers.

THE CAMBRIDGE HISTORY OF ISLAM (London, 1970, 2 vol.)

THE CONCISE ENCYCLOPEDIA OF ARABIC CIVILIZATION - THE ARAB EAST (New York, 1960, 589 pp.)

ENCYCLOPEDIA JUDAICA (Jerusalem, 1972, 16 vol.)

THE ENCYCLOPEDIA OF ISLAM (London, 1960, 3 vol.)

Y. Shimoni and E. Levine, A POLITICAL DICTIONARY OF THE MIDDLE EAST IN THE TWENTIETH CENTURY (Jerusalem, 1972, 434 pp.)

Other good sources of information are publications issued periodically, such as:

THE MIDDLE EAST AND NORTH AFRICA (London, an annual)

MIDDLE EAST RECORD (Jerusalem, published irregularly since 1960)

Many research organizations and scholarly societies are concerned with various aspects of the Middle East. For information about them see:

F. Ljunggren, (ed.) AN INTERNATIONAL DIRECTORY OF INSTITUTES AND SOCIETIES INTERESTED IN THE MIDDLE EAST Amsterdam, 1962, 159 pp.)

Among the many, eight general books concerning cutural, economic, political and social issues in the Middle East can be identified as especially useful for teachers of this area.

R.N. Anshen, (ed.) MID-EAST: WORLD-CENTER, YESTERDAY, TODAY AND TOMORROW. New York: Science of Culture Series, 1956. Vol. VII, 386 pp.

Monroe Berger, THE ARAB WORLD TODAY. New York, 1964. 463 pp.

Sidney N. Fisher, THE MIDDLE EAST, A HISTORY. London, 1960. 650 pp.

Richard N. Frye, (ed.) THE NEAR EAST AND THE GREAT POWERS. Cambridge, Mass., 1951. 214 pp.

G. H. Kirk, A SHORT HISTORY OF THE MIDDLE EAST FROM THE RISE OF ISLAM TO MODERN TIMES. New York, 1959. 336 pp.

W. Z. Laqueur, (ed.) THE MIDDLE EAST IN TRANSITION: STUDIES IN CONTEMPORARY HISTORY. New York, 1958. 513 pp.

G. Lenczowski, THE MIDDLE EAST IN WORLD AFFAIRS, 2nd. Ed. Ithaca, 1956. 576 pp.

Bernard Lewis, THE MIDDLE EAST AND THE WEST. London, 1967. 160 pp.

For use either as a textbook or as a background source for teachers, this volume is suggested:

Yahya Armajani, MIDDLE EAST: PAST AND PRESENT. Englewood Cliffs, N.J.: Prentice-Hall, 1970. 408 pp.

A Handbook of teaching materials and media recources on the area is:

Leonard Kenworthy, STUDYING THE MIDDLE EAST IN ELEMENTARY AND SECONDARY SCHOOLS, 2nd. Ed. New York: Teachers College Press, 1968. 55 pp.

AIMS IN TEACHING THE MIDDLE EAST

"Learning is the process by which an activity originates or is changed through reacting to an encountered situation . . . "[4]

A good teaching method is to provide learning experiences through activities of inquiry that test the learner's knowledge of the techniques of discovery, analysis and problem solving. In order to accomplish this basic aim, more specific learning objectives have to be formulated, because this process helps teachers to identify the methods that should be employed. Also, when they are shared with the students, well conceived instructional objectives provide a basis for self-evaluation. Finally, instruction usually requires audio, printed or visual media as part and parcel of the curriculum design. This "software" can be intelligently selected only in the light of cognitive and affective objectives.

Knowledges about the Middle East

These are illustrative educational objectives pertinent to Middle East Studies, stated as student behaviors. The student will be able to:

1. Define terms such as Arab, Muslim, Sephardic, Uniate . . .
2. Recall major facts about the Middle East in terms of dates, events, names and locations of places, the actions and names of persons, names of various culture groups . . .
3. Identify sources of information on specific Middle Eastern topics, such as soil and water concerns in the region, the status of Middle Eastern women, oil in the Middle Eastern economy, or educational patterns in the area.
4. Make generalizations about particular Middle Eastern cultures and support them with adequate evidence.
5. Interpret environmental and social data from specific Middle Eastern countries and the various regions that comprise this area of the world.
6. Distinguish between primary and secondary, accurate and biased sources of information.

7. Extrapolate from descriptions or experiences of conditions in a particular culture or society the trends or tendencies that have been operational.
8. Describe the nature and dimensions of a broad Middle Eastern problem, such as water.
9. Analyze the impact of the exploitation of their natural resources and industrialization on traditional Middle Eastern cultures.
10. Compare issues and problems in the Middle East with their couterparts in the United States.

Developing these types of knowledge can lead toward more complex objectives on the levels of application, synthesis and assessment. For example, the student will now be able to:

1. Predict probable effects of a change in some key environmental factor in a Middle Eastern society, such as drought or the salination of water resources.
2. Plan procedures for devising solutions to social problems such as sharing scarce water resources, diffusing educational opportunity, or resolving cross-cultural conflicts within Middle Eastern societies.
3. Apply principles in order to recognize the characteristics of various Middle Eastern social situations, such as that of village subsistence farmers or new urban dwellers in the cities of the area.
4. Recognize unstated assumptions regarding culture, economics, life styles, politics, religion, religion and social values.
5. Distinguish between facts and hypotheses regarding Middle Eastern phenomena.
6. Identify motives, perspectives and biases that are exhibited in materials concerned with the Middle East.
7. Distinguish between the conclusions that are drawn and evidence which is used to support them in primary and secondary sources about the Middle East.
8. Recognize what data are relevant to framing his own assumption or validating his hypotheses.

9. Speculate about the causal relationships between environment and the social structure.
10. Appraise by well-formulated standards different possible solutions to Middle Eastern problems such as water, educational efficiency, cultural diversity and international conflicts and alliances.

Regarding the degree of awareness and the attitudes of students, some additional objectives can be formulated. The student will:

1. Have greater sensitivity and acceptance of the aesthetic aspects of Middle Eastern cultures.
2. Recognize that there may be more than one defensible point of view regarding most aspects of Middle Eastern life.
3. Be interested in visiting museums with exhibits on the Middle East, voluntarily read literature about this area, and participate with others in discussing Middle Eastern affairs.
4. Have more responsibility in public discussions and actions related to Middle Eastern concerns in domestic and international affairs.
5. Demonstrate belief in and commitment to concepts such as tolerance for the values of others, devotion to the welfare of mankind, and the acceptance of cultural diversity.
6. Form judgments regarding the responsibilities of persons, ethnic communities and societies to act humanely and to conserve human and natural resources.
7. Forecast the directions in which Middle Eastern societies are most likely to move and have preferences regarding desireable social objectives in this area.
8. Be ready to review and revise previous judgments in the light of new evidence or experiences.
9. Acquire the habit of approaching controversies as objectively as possible.
10. Increase his willingness to face facts and draw conclusions in light of them.

Case Study No. 1

THE UNIVERSALITY OF WATER PROBLEMS AND AMERICAN WATER PROBLEMS

Relevance is a basic ingredient in any learning process. What could be a more basic concern than water? It is an essential substance for life and therefore an element in every human environment. Many aspects in all cultures have been determined by water's availability. Due to the universality of water problems, this topic helps us to understand our own culture better as the basis for identifying parallels in the Middle East. Many sub-topics are subsumed under the broad theme of water:

Providing adequate water supplies
Conserving water
Agricultural water uses and irrigation
Water as an energy source
Water rights
Water in industry
Water transportation
Pollution, desalination and purification of water
Technologies of harnessing water resources

An idea of the urgency attached to increasing our awareness of water is contained in this passage:

> . . . The civilizations of ancient times owed their greatness to water. Ancient Egypt owed its greatness to the waters of the Nile, and ancient Babylonia to the waters of the Tigris and Euphrates Rivers . . . It was upon the waters of lakes and rivers that thegreat cities of America grew. New York City owes its greatness to the waters of the Hudson . . . Chicago, America's second city, owed its growth to its location on the waters of Lake Michigan. Today each of these waters in polluted. It is likely that if these lakes and rivers were in days past as filthy as they are today, the great centers of civilization would never have taken root and developed near them.[5]

Probably students are aware of some water problems in their home environments. They can broaden their understanding to identify national and international water issues in North America as a comparative basis for studying water in Middle Eastern societies.

Teaching Strategies

1. List the kinds of water problems in (a) regions of the United States and (b) your vicinity.
2. Organize a field trip to observe a water problem or visit a public agency working in this area.
3. Tape interviews with people who have experienced or are working to solve water problems.
4. Collect all the articles, announcements or editorials concerning water problems that appear in a local newspaper for a specific period of time.
5. Display diagrams, charts, pictures and posters about water in the classroom, halls or media center.

SOME AUDIO-VISUAL MEDIA ON WATER IN THE U.S.A.

CHALLENGE OF SIX BILLION 28 min., color film, free. Association Films, 600 Grand Avenue, Ridgefield, N.J., 07657. This is a report on the World's need for food, water, energy and transportation, see Guide to Development for more details.

THE CROOKED RAILROAD 12 min., color film, $4.75. Indiana University Catalogue. Pictures the harnessing of water for man's use when a dam is built in the Puget Sound area of Washington.

FOR GRANTED - THE WATER WE DRINK 17 min., color film, $6.25. Indiana University Catalogue. Shows water purification processes and the way the culinary water supply for Gary, Indiana is tested.

MAKING THE DESERT GREEN 16 min., color film, $7.50. Indiana University Catalogue. Shows the irrigation processes in use in the Coachella Valley of Southern California.

PROBLEMS OF CONSERVATION: WATER 16 min., color film $7.00. U-Conn Catalogue. Deals with the problems of obtaining fresh water supplies and maintaining the existing water resources. Shows pollution in the Great Lakes.

TRANSPORTATION BY WATER 15 min., B/W film, $4.80. Indiana University Catalogue. Portrays transportation on rivers, seas and oceans.

WATER 14 min., color film, $7.50. Indiana University Catalogue. The concepts that water is everywhere, is essential and can't be channeled by political boundaries are communicated.

WATER 10 min., B/W film, $3.15. Indiana University Catalogue. Pictures the dependence of animals and plants on rain and introduces methods of irrigation.

WATER CRISES 28 min., color film. U-Conn Catalogue. Depicts water pollution problems in Connecticut.

WATER FOR A THIRST WORLD 30 min., B/W film, $6.75. Indiana University Catalogue. Investigates new processes of desalination.

Case Study No. 2

WATER PROBLEMS IN THE MIDDLE EAST

Water is one of the dominant problems almost everywhere in the Middle East. Therefore, a good point of entry to the area is a survey of its water concerns leading to the formulation of generalizations. Linkages between water and other aspects of life in the Middle East can be developed in order to also investigate the Middle East as a whole from this focus. But great care must be taken to see that generalizations don't slip over into simplifications that distort rather than illuminate our understanding.

Teaching Strategies

1. Prepare maps of the Middle East depicting cultivated land, precipitation and population densities. Formulate hypotheses and make generalizations concerning the relationships among these variables.
2. Make a study of the irrigation methods used in various Middle Eastern countries.
   a. List the different methods
   b. Describe each method, verbally, diagramatically or with models
   c. Imagining that the class is consulting with a Middle Eastern water authority, formulate the criteria to be applied in a particular project and suggest how you think it should be undertaken.
3. Learn about the climates of the Middle East, depicting them with pictures clipped from magazines and other periodical sources. Explore relationships between a particular climate and some aspect of Middle Eastern culture such as artifacts, architecture, dress, furnishings or city planning.
4. Compare agriculture in different Middle Eastern nations.
   a. Identify the major agricultural products of each country and explain why they are cultivated there.

b. Compare agricultural and industrial spheres of production in terms of the gross national product generated by each, changes in the numbers who are dependent on each sector during the last decade, and the problems encountered in each sector.

5. "The lack of water resources is a notorious problem in the Middle East."
   a. Do you agree with this statement? Discuss it.
   b. Can you explain why more than 70% of the population of the Middle East still lives in villages?
   c. Isn't it contradictory to state that most parts of the Middle East lack water and yet say that most of the people in this area make their livelihood from agriculture?
6. Middle Eastern river systems are often shared by two or more states. The equitable division of water use by rival nations has caused recurrent international problems. Survey these water controversies. Describe the issues, identify possible solutions and give your suggestions for resolving these conflicts.
   a. Nile River - Egypt, Sudan
   b. Euphrates River - Turkey, Syria, Iraq
   c. Jordan River and its tributaries - Israel, Jordan, Lebanon and Syria
7. Films on Middle Eastern regions can be shown without captions or narration so that the students can apply their knowledge in order to identify the country and culture that is portrayed by using clues derived from the generalization that they have learned.
8. Plan a Middle Eastern evening with typical food from the region and appropriate entertainment.
   a. Invite local Middle Easterners to the festivities and ask them to critique their authenticity.
   b. Consider the impact of situation and setting on the cultural aspects of the evening, such as food, costume, social mores, music . . .

AUDIO-VISUAL MEDIA ON THE MIDDLE EAST

AFRICAN CONTINENT: NORTHERN REGION 13 min., color film, $4.80 Indiana University Catalogue. Points out that the shortage of water is a major problem in this region. Shows the southern edge of the Sahara Desert and the countries of Morocco, Algeria, Spanish Sahara and Tunisia.

ARAB VILLAGE 10 min, B/W film, #3.15 Indiana University Catalogue. Portrays a small rural settlement in Lebanon, contrasting the primitive life there to the changes brought about when irrigation and adequate medical care are introduced.

THE ARAB WORLD 19 min., sound color filmstrip, New York Times Company, 1968. Contains a general overview of the Arab Middle East, questions, and suggestions for reading.

ARID LANDS 27 min., B/W film, $7.25 Indiana University Catalogue. Documents a U.N. sponsored project to develop desert areas in Pakistan.

DESERT NOMADS 22 min., B/W film, $5.75 Indiana University Catalogue. Portrays the life of desert nomads in Morocco under French rule.

INTRODUCING TURKEY 22 min., B/W film $4.20 Indiana University Catalogue. Shows the agricultural, industrial and social modernization of Turkey.

IRAN: FARMERS AND NOMADS 39 frame filmstrip, color, $8.50 McGraw-Hill Films. 330 West 42nd Street, New York, N.Y. 10036. Portrays village life in Iran, contrasting it with the customs of nomadic peoples.

LIFE IN AN OASIS 12 min., color film, $4.75 Indiana University Catalogue. Small oases in the North African desert are shown and compared with the Nile River Valley, which is actually a huge oasis.

MASTERS OF THE DESERT 30 min., B/W film, $6.75 Indiana University Catalogue. The methods used by Prof. M. Evenari of Hebrew University to grow crops on a dry farm located in the Negev Desert in Israel are presented.

THE MIDDLE EAST - THE NEED FOR WATER 17 min., color film, $8.00 Indiana University Catalogue. Surveys the water problems of the Middle East.

PAKISTAN: THE DRY WEST 40 frame filmstrip, color, $8.50 McGraw-Hill Films, 330 West 42nd Street, New York, N.Y. 10036. The critical problems of an arid region of communicated in this filmstrip.

PUNJABI VILLAGE 33 min., B/W film, $8.00 Atlantis Production, Inc. Thousand Oaks, Cal. 91360. Portrays rural life and problems in an area of Pakistan.

STORY OF MAHMOUD 29 min., B/W film, $4.25 Indiana University Catalogue. The story of an Arab village boy who learns modern agricultural methods.

TURKEY: THE VILLAGE AND THE LAND 39 frame filmstrip, color, $8.50
McGraw-Hill Films, 330 West 42nd Street, New York, N.Y. 10036. Rural conditions in western Turkey are conveyed.

WATER FOR THE PEOPLE 11 min., B/W film, $3.15 Indiana University Catalogue. Compares water problems in Iraq and El Salvador, showing how U.N. personnel helped the people to solve them.

Case Study No. 3

THE NILE RIVER AS A SOURCE OF LIFE FOR EGYPT AND THE SUDAN

The Nile has one of the largest river systems in the world; its basin covers approximately 1,100,000 square miles. It is the main water source for Egypt's population of over 35 million. The whole region depends almost entirely on irrigation, because the annual rainfall isn't sufficient to produce substantial crops. Through a highly advanced system of dams and coffers, the Nile water is harnessed for agriculture. It is also important as a means of navigation and a source of energy as well. On the other hand, despite great progress in public health in recent years, a segment of the Egyptian population, especially its villagers, still suffer from diseases that originate from contaminated and polluted water supplies.

Just as Egypt depends on the Nile, Iraq looks to its two major rivers: the Tigris and Euphrates. A large area of southern Turkey is being watered by the Seyhan River which has been backed up by the largest earth filled dam in EurAsia near the city of Adana. Turkey is constructing other major dams and Iran also is bringing large areas under cultivation by daming water for irrigation. This is the case in Pakistan, too. As we will see, Israel and Jordan also are dependent on the Jordan River and its tributaries. The case study is focused on the Nile River and its various impacts on Egypt, but the relationships that will be observed here can be generalized, in a modified form, to other parts of the Middle East.

Teaching Strategies

1. Describe the irrigation system of the Nile.
2. Compare the Nile irrigation system in ancient times with its extent and operation in the Twentieth Century.
3. Discuss the Nile as an energy source.
4. Conduct an historical survey of the international conflicts between Egypt and the Sudan, trying to ascertain the direct or indirect role which water played in the, and analyzing how they have been resolved.

5. Compare water supply, irrigation and population problems in Egypt and the Sudan.
6. Compare American problems with river pollution to Egypt's polluted problem.
7. "The Aswan High Dam is a solution to the economic problems of Egypt." Discuss.
8. Draw two maps: one of the irrigated areas in Egypt and the other showing the distribution of population densities in the country. Summarize the correlation between the two maps.
9. Compare the life of an American farmer in the Mississippi River Valley to that of an Egyptian farmer in the Nile River Valley.
10. How does the fellah culture of the Nile Valley differ from bedouin culture in the desert oases of the Middle East? In what ways are they similar?

AUDIO-VISUAL MEDIA ON THE NILE

EGYPT: A COUNTRY IN TRANSITION 10 min., color film, $4.75 Indiana University Catalogue. Contrasts modern and more primitive ways of life in Egypt, showing the Nile and its importance to the society.

AN EGYPTIAN VILLAGE (Gueziret Eldahab) 19 min., color film, $7.00 Indiana University Catalogue. Daily activities in a small Egyptian village are pictured, showing the cultivation and irrigation methods being used.

EGYPT AND THE NILE 16 min., color film. Encyclopedia Britannica Films. Historical background on Egypt and the Nile Valley.

EGYPT: CRADLE OF CIVILIZATION 11 min., color film, $4.75 EBF and IU. The People of the Upper Nile are pictured and information is conveyed about how they have depended on the river for food, water and transportation for centuries.

LIFE IN THE NILE VALLEY 11 min., color film, $4.75 IU. The impact of the geography of the Nile River Valley on the situation of an average village family is conveyed.

THE NILE IN EGYPT 11 min., color film, $4.75 IU. Presents the geographical location of Egypt in relation to the Sahara Desert. Using dams to control floods and bring land under cultivation is discussed.

NILE RIVER VALLEY AND THE PEOPLE OF THE LOWER RIVER 17 min., color film, $7.25 IU. Scenes from the Blue Nile, the White Nile and the Delta region include views of irrigation projects.

RIVER NILE 29 min., color film, $12.50 McGraw-Hill. The Nile is traced from its sources and rain forests, mountain areas, etc. are compared with the deserts of Egypt.

THEY PLANTED A STONE 26 min., B/W film, $5.85 IU. Documents the work of harnessing the Nile waters and reveals the resulting changes in living patterns in the Sudan.

Case Study No. 4

RECLAIMING THE DESERT IN ISRAEL

Three fifths of Israel's territory is desert. Most of the rest of the nation's land reserves are arid. Its largest undeveloped areas are located in the South, while almost all of the water resources are in the North. In Mid-1965 the National Water Carrier was completed. This project diverted part of the waters of the Jordan River into a system of open aqueducts, tunnels and pipelines.[6]

The Arava is a long narrow strip in the southeastern part of the Negev Desert. This part of the land has not been connected to the Water Carrier, and is similar to the deserts in the American southwest. It has been settled by agricultural Kibbutzim. These settlements exist in a very hostile desert climate where the temperatures average no less than 100 degrees F. for much of the year and the annual rainfall is less than two inches. Nevertheless, some Kibbutzim are now profitable farming communities, growing chiefly winter crops. Studying water in Israel presents the opportunity to learn about the Kibbutz Movement (voluntary collective communes) and the Moshav Movement (voluntary cooperative agricultural settlement).

Teaching Strategies

1. Map study: (a) Draw a map of modern Israel. Color the fertile and desert areas. Trace the line of the National Water Carrier. (b) Indicate the distribution of population on another map. (c) Write an article discussing Israel's water problems on the basis of the two maps that you drew.
2. Imagine that you are a new settler in one of the Arava Kibbutzim.
   (a) List the obstacles with which you would have to cope.
   (b) Write a letter to a friend in your town in the United States describing your life.
3. Do you believe that Kibbutz and moshav type agricultural settlements could be implemented in other Middle Eastern countries? Elsewhere in the world? Why? Why not?

4. "During more than two decades Israel's agricultural growth changed and she became an exporter of agricultural products instead of an importer." Discuss this statement in light of: (a) the kinds of agricultural products (b) water in agricultural development.
5. The Jordan River waters have been focus of international conflicts among Israel, Jordan, Lebanon and Syria. (a) What were the problems? (b) What were the Lowdermilk and Johnston plans? (c) What is the current situation? (Give short answers and prepare a list of informational sources.)
6. Israel's water problem isn't new. Find references to it in Biblical literature: Genesis 26; Deuteronomy 11: 10-12, 28:12, 23-24; I Kings 18; II Kings 20:20. . .
7. Desalination is one solution to water problems.
   (a) List the advantages and disadvantages of desalination.
   (b) Could desalination projects contribute to peace in the Middle East?
   (c) Why might the United States be interested in experiments with desalination in Middle Eastern countries?
8. Compare the water problems of Egypt, Israel, Iran and Turkey.
9. Draw up a proposal for a joint project for developing and using water resources among Israel, Jordan, Lebanon and Syria.
10. Compare water problems and their solutions in Israel and the United State.

AUDIO-VISUAL MEDIA ON RECLAIMING THE ISRAELI DESERT

BUILDING A NATION (Israel) 20 min., B/W film, $5.00 IU. Portrays Israel as an ancient country that has been changed by modern technologies, including farm mechanization and irrigation projects.

ISLAND IN THE DESERT 16 min., color film, free Alden Films, 5113 16th Avenue, Brooklyn, N.Y. 11204 The story of Neot Hakikar, an oasis in Israel's southern desert, the Negev.

ISRAEL color film, $4.75 IU.

Overviews the geographical, economic and social factors that influence life in modern Israel. Irrigation is shown as one way of increasing food production.

ISRAEL: THE FARM AND DESERT. 39 frame color filmstrip, $8.50 McGraw-Hill

LET'S IMAGINE LIFE IN UTOPIA 28 min., B/W film, free Alden Films.

Pictures the collective life on a Kibbutz.

ISRAEL'S NATIONAL WATER CARRIER 18 min., color film, free Alden Films.

The story of how this massive water carrier was built from the Sea of Galilee in the North through 100 miles of canals and tunnels to the Negev Desert.

THE MOSHAV - ISRAEL'S MIDDLE WAY 25 min., color film, free Alden Films.

Cooperative settlements are pictured and Israel's experiments with agricultural and regional planning are presented in this film.

PROFILES OF THE NEGEV 13½ mon., color film, free Alden Films. A good overview of Israel's desert region and the steps that have been taken to bring it into production.

REFERENCES

1. Bernard Lewis, THE EMERGENCE OF MODERN TURKEY. New York: Oxford, 1969, provides a scholarly understanding of the Ottoman Empire.
2. There is an excellent documentary compilation concerning relations between the West and Middle East. See, J.C. Hurewitz, DIPLOMACY IN THE NEAR AND MIDDLE EAST: A DOCUMENTARY RECORD, 1914-1956, Vol. II. New York, 1956.
3. For example, see E.A. Speiser, THE UNITED STATES AND THE NEAR EAST, Cambridge, Mass.: Harvard, 1950; and G.G. Stevens, (ed.) THE UNITED STATES AND THE MIDDLE EAST, Englewood Cliffs, N.J.: Prentice-Hall, 1964.
4. E.R. Hilgard and G.H. Bower, THEORIES OF LEARNING. New York, 1966, p. 2.
5. G. Leinwand and G. Popkin, (eds.), AIR AND WATER POLLUTION New York, 1969, pp. 26-29.
6. T. Prittie, ISRAEL - MIRACLE IN THE DESERT. Baltimore: Penguin, 1971, contains data on the waters of the Jordan and reclaiming the Negev. See pp. 53-88.